Build this boat-shaped bar

Be the Captain Morgan of your domain with this clever boat-shaped bar

By Rick Campbell

Photo by Roger Yip

I have a long list of projects to tackle before I hang up my tool belt for good. And near the top of this list is a boat. Although this rowboat-shaped bar will never leave the shore, its construction is similar to building the real thing in many ways.

You need thin wood for many parts of this project, both to keep weight down and to allow the wood to bend. That's why I chose a marine favourite to build the bar: cedar.

Instructions

Getting started

Begin by making a rectangular blank for the back panel of the bar, which consists of 13 narrow slats brought together with splines. Cut the slats to size, then use the tablesaw to rip a 1/4"-deep x 1/8"-wide slot along the adjoining edges to receive the splines. You'll find tips for creating spline joints on next page.

Normally, I use bar clamps to secure large panels such as these; but in this case, the force is likely to cause the thin panel to buckle. You could prevent this by clamping cauls on the top and bottom, but there's an easier way. Simply stretch celluloid packing tape across the face of the panel at regular intervals. Just be sure to tape both sides or the assembly will cup in the centre. After the glue sets, remove the tape and sand both sides of the panel smooth.

Next, lay out the curved sides and the locations of the horizontal bulkheads. Start by scribing a line down the centre of the panel, running in the same direction as the slats, then measure out from this centre line to mark the point at which the bottom corner of each bulkhead meets the curved sides. All the measurements you need are shown on the plans (see following pages).

Drive a 1 1/2" spiral finishing nail at the end of each bulkhead location, leaving the head protruding from the top surface of the panel. You'll also need to drive a nail in the bottom corners and where the sides meet at the bow. Next, cut a long strip of wood from thin material and bend it around the outside of the nails to form a gentle curve on one side of the boat. Scribe a pencil line along the inside edge of this strip. It's good to have a couple of helpers to complete this procedure, but you can handle the job yourself by securing the wood strip to the nails with spring clamps. Repeat the entire process to prepare a mirror image of the curved profile on the opposing side. Before removing the nails, use a straightedge and a pencil to mark the bottom edges of the bulkheads. When this is done, pull all the nails and, following the pencil lines at the sides with a jigsaw, cut the back panel to shape.

Building the bulkheads

Unless you have some wide stock on hand, you need to edge-glue boards to create five wide panels for the bulkheads. As part of completing my glue-ups, I installed a few #20 biscuits to help with alignment. Note that the measurements given in the materials list for these parts includes a waste allowance for trimming panels to length. This is important because the ends need to be cut at an angle to match the curved shape of the back panel on your particular project. To determine where to cut, simply mark the ends while holding the bulkheads on edge. The reference lines you made earlier tell you exactly where to position the bulkhead when you do this operation. Take the bulkhead panels over to the tablesaw and adjust the blade to the angle of the reference lines. Make a test cut about 1/8" on the waste side of the mark to verify the blade is positioned correctly. If the cut is parallel to the line, you know you have it right.

When you're satisfied, make your cut right to the line. The angles will be different for each panel, so mark and trim each end individually.

Strengthening the structure

Set aside the bow bulkhead and glue the rest on edge to the face of the back panel. You can hold these bulkheads in place with clamps, or tack them in position through the back panel with an air nailer or spiral finishing nails.

Take a look at the plans to see how the door stiles extend between the lower bulkheads to square up the opening for the doors. To make these parts, cut out a pair of rectangular blanks, then use the sides of the back panel as a pattern to lay out the curved edges. When you trace the profile, position the inside edge of the blanks 13 5/8" from the back panel's centre line. This location corresponds to the sides of the door opening. After transferring the profile to the blanks, head over to the bandsaw to complete the cuts. Sand the edges, then install the stiles flush with the front inside edges of the bulkheads using a couple of dowels to connect the ends into the bulkheads.

Next, turn your attention to the frame that supports the base of the bar. First, cut out rail blanks for the front and rear of this frame. Once again, you'll use the back panel as a pattern to transfer the profile to the ends of the rails before trimming them to length with a bandsaw. After sanding, glue the rear piece directly to the back panel and attach the front to the underside of the lower bulkhead with glue and #20 biscuits.

Cut out blanks for the base frame side rails as well. Prior to installation, you'll need to bevel the top and bottom edges of the side rails at the tablesaw to compensate for the slope of the side of the back panel. For my project, I needed 10º angles, but you should use an angle gauge to check yours. There could be variation in the profile of your back panel.

Apply glue to the ends and the top edges of the frame sides, then clamp the parts in place.

Now that you've reinforced the stern, it's time to build the bow. Grab the short bulkhead you made earlier and prepare blanks for the triangular upper and lower bow plates. As before, use the back panel as a template to trace the side profile onto the blanks and cut out the shapes at the bandsaw. Attach the bottom edges of the plates perpendicular to the top and bottom of the short bulkhead with glue and biscuits.

Next, prepare the centre support ribs that stand vertically between the bow plates. Start by laminating a double thickness of 3/4" material to make the blank, then bevel the edges at the front to create a point that matches the tip of the bow plates. Apply glue to the top and rear edges of the joined ribs and clamp the assembly in place, with the back edge centred against the upper bulkhead. Finally, glue the entire bow assembly to the top of the back panel.

Side step

You need to strengthen the structure of the hull by connecting the bulkheads to the side panels. Each side comprises three wide strips, secured with lap joints along their mating edges. Start by preparing 1/4"-thick material for the panels using one of the resawing techniques on page 66. Rip the strips to final width and mill the 1/8"-deep x 1/4"-wide rabbets along the edges to form lap joints. Make them at the router table with a straight bit or by using a dado blade in the tablesaw.

To make this installation easier, find an extra pair of hands to help, and conduct a dry-fit before you reach for the glue.

I recommend an air-powered finishing nailer as the easiest way to tack the strips to the sides of the hull while the glue dries. The curved shape makes it difficult to get a solid grip with bar clamps. Hammer-driven finishing nails installed close to the edge of the thin material may cause the wood to split.

Adding doors and compartments

Begin by installing one of the side strips that touches the back panel. Start fastening it at the bow and tack it to the edge of the bulkheads and back panel as you progress downward. These strips are longer than necessary to allow for a slight overhang at the bow and stern.

After you've attached all three strips to one side, grab a handsaw and trim the excess material from the ends before repeating the entire process on the opposing side. Don't be concerned if there's a gap where the two sides meet at the bow. You'll cover this with nose trim. To make this trim, cut out the two 1 1/2"-wide trim strips from 1/4"-thick material and bevel the top edges to form a corner where the two pieces meet. After gluing the strips in place, perform a nose job by rounding over the sharp point with a sanding block, creating a softer, slightly weathered appearance.

All the trimmings

The next task is to build up the top edges of the gunwales (the thick ridge along the top edge of each side) by adding several layers of 3/4"-wide x 1/4"-thick trim strips. For this job, you'll need to gather as many small clamps as you can find around the shop. Also, install only one strip at a time to make the job more manageable.

To apply the strips, coat one side with glue, then work from bow to stern as you clamp the trim to the gunwale. Check for gaps and make sure the outside edges are aligned before allowing the glue to dry. Apply one layer to the outside and two more following the interior curve. The strips start from the top bulkhead on the inside and one strip goes from the nose trim on the exterior. Like the side panels, the strips are longer than needed. Simply saw off the excess at the stern when you're done. After the last strip is applied, sand the outside faces of the lamination and roundover the corners.

With the gunwale complete, make the decorative bow plate that covers the bow structure. Cut out a blank from 1/2"-thick material, trace the shape of the bow to lay out the sides, and use the grid diagram in the plans to outline the design for the decorative bottom edge. Cut out the shape on your bandsaw, sand and roundover the top edges with a router spinning a 1/4"-radius bit. After you glue the plate in place, sand the sides to blend the edges of the cap with the outside of the gunwale trim.

Open and shut

With the basic structure of the boat bar complete, you're ready to add doors to the lower compartment. These are simple frames that capture floating solid-wood interior panels. Start by edge-gluing 1/4"-thick material to make the panels. This is one more opportunity to practise the resawing techniques below.

Next, cut out the vertical stiles and horizontal rails. Mill 1/2"-deep x 1/4"-wide grooves along the inside edges to receive the panels. Don't change the set-up-you also need to make slots of the same size on the ends of the horizontal rails.

These receive wood splines that reinforce the corner joints. Cut out some splines from scrap and you're ready to assemble the doors. When you do, apply glue to the end of the rails and both sides of the splines, but keep the panel slots dry. The panels need to float freely in grooves to allow for seasonal expansion and contraction.

Install the panels and bring the frame members together with splines and clamps. Check for square before setting the doors aside to dry. I used some decorative brass hinges to mount the doors and found decorative brass dock cleats at my local building centre to use as door handles.

Accessorizing and finishing touches

A bar is not complete without a place to keep wine bottles. I included plenty of storage for these in divided compartments located directly under the bar top. Start by preparing cleats with 1/4"-wide x 3/8"-deep slots to receive the storage partitions. For a more pleasing appearance, chamfer the sides and fronts of the cleats with a router and 45º bearing-guided bevelling bit before gluing them into place. When you install these parts, make sure the upper and lower cleats are aligned to ensure the divided openings end up being square. The storage partitions are made from 1/4"-thick material. The only fancy thing about them is the concave decorative curve I cut on the front edges. The partitions slide into place with no glue so they can be removed for finishing.

Another touch is to add a place to hang your stemware. Cut out the spacers and rails as shown in the materials list, then glue the rails to the spacers with an equal overhang on both sides. The narrow rails, located on the ends, overhang the spacers only on the inside edges. Drill pilot holes and screw the assemblies to the underside of the shelf bulkhead. Start from the centre and work your way out to the sides, making sure to maintain a consistent 3/4" gap between the rails. Use a scrap spacer to eliminate the need to measure and help you to achieve more consistent results.

Final finishing

To finish my bar, I chose to go with a natural look by applying a tinted exterior wood preservative-Thompson wood protector in sheer honey gold. This step slows the greying process that occurs with any wood after extended exposure to the sun. Another option is to apply a distressed paint finish that simulates years of weathering at sea.

If you plan to use the boat bar outdoors, anchor the top to a fence or wall to prevent it from toppling over.

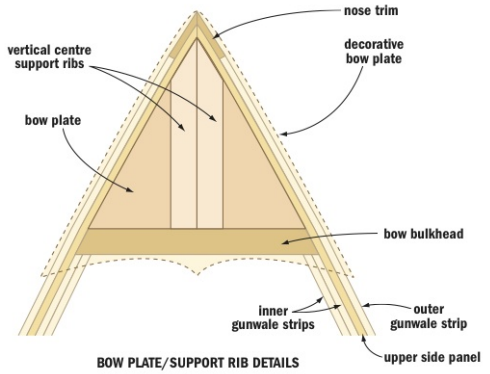
Now you can grab a glass and make a toast to the maiden voyage of your new bar.

Tools and Materials

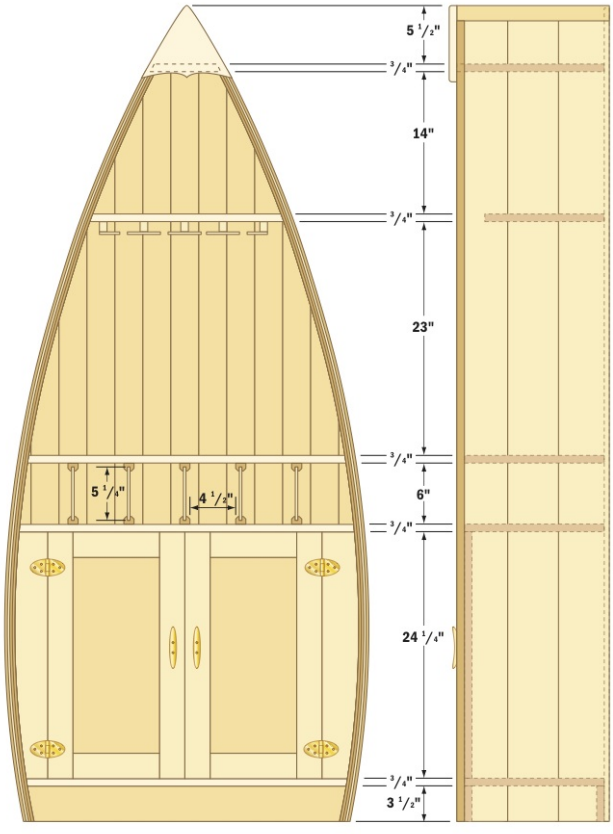
Part	Material	Size (T x W x L*)	Qty.
Back panel strips	cedar	1/2" x 1 3/4" x 80"	13
Lower bulkheads	cedar	3/4" x 13 3/4" x 36"	3
Shelf bulkhead	cedar	3/4" x 11 3/4" x 22"	1
Bow bulkhead	cedar	3/4" x 9" x 14 1/2"	1
Door opening stiles	cedar	3/4" x 4" x 24 1/4"	2
Front/rear base frame rails	cedar	3/4" x 3 1/2" x 33"	2
Base frame side rails	cedar	3/4" x 3 3/4" x 12 1/4"	2
Upper/lower bow plates	cedar	3/4" x 9" x 5 1/2"	2
Vertical centre support ribs	cedar	3/4" x 5 1/2" x 13"	2
Lower and centre side panels	cedar	1/4" x 5 1/4" x 87"	4
Upper side panels	cedar	1/4" x 5" x 87"	2
Nose trim	cedar	1/4" x 1 1/2" x 15"	2
Gunwale strips	cedar	1/4" x 3/4" x 86"	6
Decorative bow plate	cedar	1/2" x 10" x 10"	1
Door rails	cedar	3/4" x 2 1/2" x 8 1/2"	4
Door stiles	cedar	3/4" x 2 1/2" x 24 1/8"	4
Door panels	cedar	1/4" x 9 1/2" x 20 1/8"	2
Wine storage cleats	cedar	3/4" x 1" x 13 3/4"	10
Wine storage partitions	cedar	1/4" x 5 1/4" x 13 3/4"	5
Stemware spacers	cedar	3/4" x 1" x 11 1/2"	5
Wide stemware rails	cedar	1/4" x 3 1/4" x 11 1/2"	3
Narrow stemware rails	cedar	1/4" x 2" x 11 1/2"	2
Hinges	brass	Rona #248449-6	4
Dock cleat pulls (4")	brass	Rona #723032	2

* Length indicates grain direction

Plan



BOW PLATE/SUPPORT RIB DETAILS



FRONT VIEW SIDE VIEW

Illustration by Len Churchill